

AMENDMENTS TO THE SPECIFICATION

At page 2, paragraph 0004, please replace the paragraph as follows:

The details of the implantation procedure for a left ventricular access cardiac lead vary depending on the technique used and the patient's condition. In one example, a guiding catheter is introduced through a major blood vessel such as the cephalic vein. The catheter is then moved through the vasculature to locate an access vessel of interest in the heart, such as the coronary sinus ostium. The catheter can be used alone or in combination with a guide wire. After the coronary sinus ostium has been located by the guiding catheter, the cardiac lead may be inserted through the catheter and over the guide wire through the coronary ostium and into the coronary sinus or one of its branches.

At page 4, paragraph 0011, please replace the paragraph as follows:

In Another embodiment of the invention, a cardiac lead system involves a cardiac lead having an electrical conductor and a lumen. The cardiac lead system also includes a guide member displaceable within the cardiac lead lumen. A distal portion of the guide member is dimensioned to pass through an external distal opening of the cardiac lead lumen. The cardiac lead system further includes a stop mechanism. Activation of the stop mechanism prevents further advancement of the guide member through the cardiac lead lumen.

At page 4, paragraph 0013, please replace the paragraph as follows:

In accordance with another embodiment of the invention, a method of advancing [[an]]a cardiac lead into a destination vessel includes providing a cardiac lead having a lumen and an electrical conductor. A guide member is also provided, the guide member displaceable within the cardiac lead lumen. The method involves moving the guide member within the lumen of a cardiac lead so that a distal portion of the guide member extends beyond a distal external opening in the cardiac lead lumen. A first stop feature of the cardiac lead is engaged by a second stop feature of the guide member to provide a push point. The cardiac lead is advanced into the destination vessel using force applied to the push point.

At page 6, paragraph 0018, please replace the paragraph as follows:

Figure 3 is a side view of a cardiac lead system comprising an inflation element according to embodiments of the present invention;

At page 6, paragraph 0022, please replace the paragraph as follows:

Figure 5C is a side view of a stop mechanism for attaching the guide member to the guide wire, to the terminal pin of the cardiac lead, or both, according to embodiments of the invention[[.]];

At page 8, paragraph 0031, please replace the paragraph as follows:

The guide member also includes a guide wire extension positioned distal to the elongated body. The guide wire extension is dimensioned to extend through the exterior opening of the lumen at the distal end of the cardiac lead. The cardiac lead may include a first stop feature located, for example, near the distal end of the cardiac lead. A second stop feature may be positioned on the elongated body, for example, between the elongated body and the guide wire extension. Engagement of the first stop feature of the cardiac lead and the second stop feature of the guide member prevents further advancement of the elongated body through the lumen. Engagement of the first and second stop features provides a push point to advance the lead forward through the patient's vasculature.

At page 9, paragraph 0033, please replace the paragraph as follows:

Referring now to the drawings, Figures 1A and 1B show cross sectional views of the distal portion of a cardiac lead system 100 that may be used to guide a cardiac lead 101 into a desired location of the patient's vasculature in accordance with an embodiment of the invention. Figure 1C illustrates portions of a first configuration of a guide member 120 having a single diameter elongated body 121 and a guide wire extension 122. Figure 1D illustrates portions of a second configuration of a guide member 120, having a multi-diameter elongated body 121, including an enlarged portion 131. The guide member 120 also includes a guide wire extension 122. Figure 1E illustrates portions of a multi-diameter coiled conductor 105.

At page 9, paragraph 0034, please replace the paragraph as follows:

As illustrated in Figures 1A-1E, the cardiac lead system 100 includes a cardiac lead 101 having at least one lumen 106 with an external opening 110 at the distal tip of the cardiac lead 101. The external opening 110 may be covered by an openable flap, seal, or other device. The cardiac lead 101 includes one or more electrodes 103 and may optionally include a steroid collar 102 for drug delivery. The embodiment illustrated in Figure 1A shows one steroid collar 102 positioned distal to the electrode 103 with a space between the steroid collar 102 and the electrode 103. Other configurations are also possible involving any number of steroid collars 102 and any number of electrodes 103. For example, the steroid collar 102 and may be immediately adjacent to the electrode 103. In another example, one or more steroid collars 102 may be positioned proximal to the electrode 103. In a further example, one or more steroid collars ~~103~~₁₀₂ may be positioned on either side of the electrode 103. The electrode 103 may be at the tip of the lead 101 or along the body of the lead. Other configurations are possible and are considered to be within the scope of the invention. The cardiac lead 101 may also optionally include a fixation device, such as one or more tines 104, or other surface projections, or a pre-formed shape, for stabilizing the lead within the patient's vasculature.

At page 10, paragraph 0036, please replace the paragraph as follows:

At the transition region 162 of the coiled conductor, the diameter of the lumen formed by the coiled conductor 105 is decreased. The ~~deeeased~~_{decrease} in the diameter of the lumen formed by the coiled conductor 105 may be accomplished by an abrupt or tapered transition region 162. In one example, the first portion 161 of the coiled conductor may have an inner diameter of about 0.025". The coiled conductor 105 may abruptly narrow at a transition region 162 to a second portion 163 having an inner diameter of about 0.018". Other dimensions for the inner diameters of the first and second portions 161, 163 of the coiled conductor 105 are also possible so long as the inner diameter of the first portion 161 is larger relative to the inner diameter of the second portion 163.

At page 12, paragraph 0043, please replace the paragraph as follows:

In the embodiments illustrated in Figures 1A through 1E, the coiled conductor transition region 162 and the guide member transition region 172 form first and second stop features, respectively. As illustrated in Figure 1A, the guide member ~~121120~~ may be displaced through the larger diameter section 161 of the coiled conductor 105. Engagement of the guide member transition region 172, forming the first stop feature, with the coiled conductor transition region 162, forming the second stop feature, prevents further forward motion of the elongated body ~~120121~~ through the lumen 106.

At page 13, paragraph 0045, please replace the paragraph as follows:

Figures 2A-2D illustrate further embodiments of the cardiac lead system 200. In one configuration, the cardiac lead 201 includes a multi-diameter inner lumen 206 with an external opening 210 at the distal tip of the cardiac lead 201. The external opening 210 may be covered by an openable flap, seal, or other openable component. The lumen 206 of the cardiac lead 201 comprises a first portion 261 having a first diameter throughout a majority of the cardiac lead 201. A predetermined distance from the distal end of the cardiac lead 201, the diameter of the lumen 206 narrows to [[a]] to form a smaller diameter portion 263 of the lumen. A transition region 262 between the larger 261 and smaller 263 diameter portions of the lumen 206 may be abrupt or tapered. The transition region 262 between the first portion 261 of the lumen having a larger diameter and the second portion 263 of the lumen having a smaller diameter forms a first stop feature.

At page 20, paragraph 0066, please replace the paragraph as follows:

A first set of mating features may be positioned, for example, within the transition region of the cardiac lead lumen. The second set of mating features may be positioned, for example, within the transition region of the guide member or at the distal end of a hollow elongated body. Other locations for the mating features are also possible and are considered to be within the scope of the invention.

At page 21, paragraph 0068, please replace the paragraph as follows:

Figure 7B illustrates a cut away view of a guide member 720 with a moveable core 727 displaceable within a lumen 726 of the guide member and extendable into the guide wire extension 722. In this example embodiment, the guide wire extension 722 has a preformed shape as described in connection with Figure 7A. As the moveable core 727 is advanced into the guide wire extension, the pre-formed curve 725 of the guide wire extension 722 straightens, deflecting the distal tip 779729 of the guide wire extension 722. The moveable core 727 may be retracted, allowing the guide wire extension 722 to return to its previous shape. The deflectable guide wire extension 722 may be particularly useful in moving the cardiac lead system through tortuous sections of the patient's vasculature.